CLAIMS

1. An apparatus for file defragmentation of at least one storage medium, comprising:

a computer system at least coupled to the at least one storage medium;

a tracker, wherein the tracker is at least configured to maintain a record of at least locations of a plurality of file fragments on at least one storage medium; and

an agent, wherein the agent is at least:

configured to operate while the computer system is at least idle;

configured to defragment the plurality of file fragments; and

configured to delete the record of at least locations of the plurality of file fragments.

2. The apparatus of Claim 1, wherein the agent further comprises at least having the ability to modify attributes of defragmentation.

3. The apparatus of Claim 2, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size,

read attributes, update attributes, and time of day of typical access.

4. An apparatus for monitoring file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

a memory, wherein the memory is at least configured to store locations of a plurality of file fragments;

a system monitor, wherein the system monitor at least determines if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media; and

an accounting means, wherein the accounting means is at least configured to store locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred.

5. An apparatus for file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

a memory, wherein the memory is at least configured to store locations of a plurality of file fragments;

an idle monitor, wherein the idle monitor is at least configured to enable defragmentation while the computer system is at least idle;

a defragmenter, wherein the defragmenter is at least configured to defragment the plurality of file fragments; and

an update monitor, wherein the update monitor is at least configured to delete a record in the memory of at least locations of the plurality of file fragments that at least been defragmented.

6. The apparatus of Claim 5, wherein the agent further comprises at least having the ability to modify attributes of defragmentation.

7. The apparatus of Claim 6, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access.

8. A method of for file defragmentation of at least one storage medium coupled to a computer system, comprising:

determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media;

storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium;

determining if the computer system is idle;

if the computer system is not idle, sleeping for an interval;

if the computer system is idle, defragmenting a file;

determining if defragmentation is complete;

if defragmentation is complete, deleting the location of the fragmented file clusters in the storage medium;

if defragmentation is not complete, determining if defragmentation is stopped by activity;

if defragmentation is stopped by activity, sleeping for an interval; and

if defragmentation is not stopped by activity, reporting an error.

9. A method for monitoring file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

determining if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media; and

storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium.

10. A method of defragmenting at least one storage medium coupled to a computer system, comprising:

determining if the computer system is idle;

if the computer system is not idle, sleeping for an interval;

if the computer system is idle, defragmenting the file;

determining if defragmentation is complete;

if defragmentation is complete, deleting a location of the fragmented file clusters in a storage medium;

if defragmentation is not complete, determining if stopped by activity;

if defragmentation is stopped by activity, sleeping for an interval; and

if defragmentation is not stopped by activity, reporting an error.

11. A computer program product for file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

computer code for determining if fragmentation occurrs when data is written to, deleted from, or scanned from the at least one storage media;

computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium;

computer code for determining if the computer system is idle;

if the computer system is not idle, computer code for sleeping for an interval;

if the computer system is idle, computer code for defragmenting a file;

computer code for determining if defragmentation is complete;

if defragmentation is complete, computer code for deleting the location of the fragmented file clusters in the storage medium;

if defragmentation is not complete, computer code for determining if defragmentation is stopped by activity;

if defragmentation is stopped by activity, computer code for sleeping for an interval; and

if defragmentation is not stopped by activity, computer code for reporting an error.

12. A computer program product for monitoring file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

computer code for determining if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media; and

computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium.

13. A computer program product for defragmenting at least one storage medium coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

computer code for determining if the computer system is idle;

if the computer system is not idle, computer code for sleeping for an interval;

if the computer system is idle, computer code for defragmenting a file;

computer code for determining if defragmentation is complete;

if defragmentation is complete, computer code for deleting a location of the fragmented file clusters in a storage medium;

if defragmentation is not complete, computer code for determining if stopped by activity;

if defragmentation is stopped by activity, computer code for sleeping for an interval; and

if defragmentation is not stopped by activity, computer code for reporting an error.